

### **REMARKS**

Claims 1-55 are pending in the present application. In the Action, the Office makes the following determinations:

- The Office has rejected 1, 17, 33, 38, 43, 48 and 55 under 35 USC Section 112 as allegedly being indefinite.
- The Office has rejected claims 17-37 and 48-55 under Section 101 as allegedly being directed to non-statutory subject matter.
- The Office has rejected claims 1-7, 15-23, 31-48, 51, and 55 under Section 103 as allegedly being unpatentable over previously cited references Plamondon with Geiger in view of Hu.
- The Office has rejected claims 8-11, 24-27, and 52-54 under Section 103 as allegedly being unpatentable over previously cited references Plamondon with Geiger in view of Hu in further view of Young.
- The Office has rejected claims 12 and 28 under Section 103 as allegedly being unpatentable over previously cited references Plamondon with Geiger in view of Hu in further view of Obata.
- The Office has rejected claims 13, 14, 29, 30, 49, and 50 under Section 103 as allegedly being unpatentable over previously cited references Plamondon with Geiger in view of Hu in further view of Collot.

By this response, Applicants traverse all rejections and request further examination of the Application. Applicants have added claims 56 and 57. Claims 14, 30 and 50 have been amended to change the spelling of the word “optimise” to “optimize”. Additionally, without disclaimer or prejudice, the preambles of claims 1, 17, and 33 have been amended to remove portions of the preamble. The Applicants request consideration and entry of the amendments.

### **EXAMINER INTERVIEW**

The Applicants wish to thank the Examiner for the courtesies extended to the undersigned representative during the telephonic interviews held on December 22, 2009 and February 16, 2010. During the interview, Applicants’ representative discussed the

outstanding 101, 112, and 103 rejections. Agreement was reached that the 101 rejection would be withdrawn in view of the presently amended claims. Agreement was reached that the 112 rejection would be withdrawn in view of the remarks submitted herein. The Examiner agreed to reconsider the 103 rejection in view of the amended claims and following remarks.

#### **REJECTIONS UNDER SECTION 112**

The Office has rejected claims 1, 17, 33, 28, 43, 48 and 55 as allegedly being indefinite. The Office is basing the rejection on the assertion that normalizing the signature arc length and time to 1 renders the claim indefinite. Applicants respectfully traverse the rejection and request reconsideration.

Applicants respectfully submit that arc length is well known to one skilled in the art, typically defined as the length of an arc segment. Arc length can be determined using a number of known methods such as segmentation or integration. Regarding the claim elements “normalizing the signature trace to an arc length of 1” and “a total time to produce the signature to 1,” Applicants submit that these claim elements are clear and definite to one skilled in the art. The process of normalizing a measured quantity is generally known as modifying the quantity so that the measurement is 1, or the unit measurement. The particular unit can depend on the context and determined according to the specific application, so long as the unit vector is consistently applied. Normalization thus applied to arc length may mean, for example, that the measured arc length is modified such that the length (in whatever measurement units are implemented) is 1. Likewise, normalizing a period of time is generally understood, for example, as modifying the measured time for an event to 1 unit, the particular unit being determined by the context or application.

For at least the above reasons, Applicants submit that claims 1, 17, 33, 28, 43, 48, and 55 are clear and definite, and request reconsideration and withdrawal of the rejections to claims 1, 17, 33, 28, 43, 48, and 55 under § 112. During the February 16, 2010 interview, the Examiner agreed that the rejection would be withdrawn in view of the above remarks.

#### **REJECTIONS UNDER SECTION 101**

The Office has rejected claims 17-37 and 48-55 as allegedly being directed to non-statutory subject matter. Applicants respectfully traverse the rejection and request reconsideration.

In order to obtain a signature trace, a user inputs the signature into “the manual input device,” as recited in claims 17, 33, 48, and 55. Applicants submit that the method is tied to another statutory class, namely, a machine. Applicants submit that the claims meet the requirements under § 101, and request reconsideration and withdrawal of the rejections to claims 17-37 and 48-55 under § 101. During the February 16, 2010 interview, the Examiner agreed that the rejection would be withdrawn.

### **REJECTIONS UNDER SECTION 103**

The Office has rejected claims 1-55 under § 103 as allegedly being unpatentable over Plamondon with Geiger in view of Hu. Applicants respectfully traverse the rejection and request reconsideration.

#### **A. The References Do Not Teach or Suggest The Claimed Invention**

In light of the above explanation of the claim elements “normalizing the signature trace to an arc length of 1” and “a total time to produce the signature to 1,” Applicants submit that the combination of Plamondon with Geiger in view of Hu does not teach or suggest claim 1. The Examiner admits that Plamondon does not disclose normalization means for normalizing the signature trace to generate a plurality of temporally equidistant points on the signature trace by normalizing the signature trace to an arc length of 1 and a total time to produce the signature to 1 and contends that Geiger discloses these features. Applicants respectfully disagree.

For example, with reference to Geiger paragraphs [0020], [0054], [0080], and [0062] which were cited by the Examiner, a Gaussian smoothing technique is used to reduce spikes in data (e.g. noise) by reducing the deviation of data points along a data trace. This is not the same as normalizing the signature trace to an arc length of 1 and a total time to produce the signature to 1 as recited in claim 1. Nowhere does Geiger disclose such features.

For at least these reasons, Plamondon, Geiger and Hu, either alone or in combination, fail to disclose or suggest all recitations of claim 1. The Applicants request reconsideration and withdrawal of the rejection to claim 1 under § 103.

B. The Examiner Has Improperly Combined The Teachings Of Plamondon and Hu

The systems taught by Plamondon and Hu operate in different ways, and combining them would (1) result in a system unsatisfactory for its intended purpose and (2) change the principle of operation of the prior art invention being modified. The system of Plamondon compares signatures with a reference signature where each of the test and reference signatures are acquired by generating three electrical digital position signals characterizing a trajectory of a handwriting signature and analyzing the dynamic parameters of the signals (See, for example, Plamondon column 1 lines 48-50 and column 2 lines 24-25). The system of Hu segments a signature and, for each segment, evaluates at least one local feature to obtain a feature-value vector. Hu then teaches computing the likelihood that the segments having the observed sequence of feature values were generated by a particular hidden Markov model, the model comprising a sequence of states having duration probabilities and feature-value histograms. The system of Hu and Plamondon thus operate in fundamentally different ways. Applicant submits that one of skill in the art would not be motivated to combine these two references because the addition of Hu to Plamondon changes the principle of operation of Plamondon and renders Plamondon unsatisfactory for its intended purpose as modified by Hu.

Independent claims 17, 33, 38, 43, 48, and 55

For at least the reasons discussed above with regards to claim 1, Plamondon, Geiger and Hu, either alone or in combination, fail to disclose or suggest all recitations of claims 17, 33, 38, 43, 48, and 55. The Applicants request reconsideration and withdrawal of the rejection to claims 17, 33, 38, 43, 48, and 55 under § 103.

Dependent claims 2-16, 18-32, 34-37, 39-42, 44-47, and 49-54

Claims 2-16, 18-32, 34-37, 39-42, 44-47, and 49-54 stand rejected under 35 U.S.C. §103, for obviousness. Applicants respectfully traverse the rejection and request reconsideration.

According to MPEP §2141, to establish a *prima facie* case of obviousness, at minimum, the cited references when combined must teach or suggest all claim limitations. With respect to the rejection of Claims 2-16, 18-32, 34-37, 39-42, 44-47, and 49-54, Applicants *traverse*, and assert that a *prima facie* case of *obviousness* has not been established. Applicants assert that the cited references, in combination, do not disclose all recited elements of claims 2-16, 18-32, 34-37, 39-42, 44-47, and 49-54. Furthermore, for at least the reason of their dependence upon an allowable base claim, it follows that claims 2-16, 18-32, 34-37, 39-42, 44-47, and 49-54 are also allowable. The Applicants request reconsideration and withdrawal of the rejections to claims 2-16, 18-32, 34-37, 39-42, 44-47, and 49-54 under § 103.

**CONCLUSION**

By the remarks and the amendments provided herein, the Applicant respectfully submits that the Office Action mailed September 16, 2009 has been traversed and that the application is in condition for allowance. If the Examiner has any concerns regarding the response provided herein, or wishes to discuss the response further, the Examiner is invited to contact the undersigned attorney.

**DOCKET NO.:** \*\*03-0005  
**Application No.:** 10/500,854  
**Office Action Dated:** September 16, 2009

**PATENT**

**Date:** February 16, 2010

/Han Gim/  
Han Gim  
Registration No. 62,953

Woodcock Washburn LLP  
Cira Centre  
2929 Arch Street, 12th Floor  
Philadelphia, PA 19104-2891  
Telephone: (215) 568-3100  
Facsimile: (215) 568-3439